

## CLAIMS:

1. A method for the discriminative adaptation of acoustic reference models of a speech recognition system, wherein, starting from a set of given acoustic speech signals whose corresponding spoken word sequences are known in each case, and starting from given acoustic reference models,

- 5 - a first scored word sequence is generated for one of the given acoustic speech signals each time through the use of the given acoustic reference models,
- if said first word sequence differs from the spoken word sequence, said first word sequence is assigned as an alternative word sequence to the spoken word sequence,
- if not, a second scored word sequence is generated for the given acoustic speech signal  
10 through the use of the given acoustic reference models, and, provided the difference between the scores of the first and the second word sequence is smaller than a first threshold value, said second word sequence is assigned as an alternative word sequence to the spoken word sequence,
- an adaptation of at least one of the given acoustic reference models is carried out with the  
15 use of the assignment/assignments thus determined.

2. A method for the discriminative adaptation of acoustic reference models of a speech recognition system as claimed in claim 1, characterized in that the assignments belonging to those given acoustic speech signals whose first word sequence is identical with  
20 the spoken word sequence and whose difference between the scores of their first and second word sequences is greater than or equal to the first threshold value are not used for the adaptation of any of the given acoustic reference models.

3. A method for the discriminative adaptation of acoustic reference models of a  
25 speech recognition system as claimed in claim 1 or 2, characterized in that those speech signals from among the quantity of given acoustic speech signals are excluded of which the first word sequence is identical with the spoken word sequence and of which the difference between the scores of their first and second word sequences is greater than or equal to a

second threshold value, and in that a new quantity of given acoustic speech signals is formed in this manner which takes the place of the old quantity of given acoustic speech signals.

4. A method for the discriminative adaptation of acoustic reference models of a speech recognition system as claimed in any one of the claims 1 to 3, characterized in that a first given quantile of the statistical distribution of the differences between the scores of the first and second word sequences of those given acoustic speech signals of which the first word sequence is identical with the spoken word sequence is used as the first threshold value.

5. A method for the discriminative adaptation of acoustic reference models of a speech recognition system as claimed in any one of the claims 3 and 4, characterized in that a second given quantile of the statistical distribution of the differences between the scores of the first and second word sequences of those given acoustic speech signals of which the first word sequence is identical with the spoken word sequence is used as the second threshold value.

6. A method for the discriminative adaptation of acoustic reference models of a speech recognition system, wherein a method as claimed in any one of the claims 1 to 5 is repeatedly implemented until a stop criterion is reached.

7. A method for the discriminative adaptation of acoustic reference models of a speech recognition system, wherein, starting from a set of given acoustic speech signals whose corresponding spoken word sequences are known or estimated in each case, and starting from given acoustic reference models,

- a first scored word sequence is generated for one of the given acoustic speech signals each time through the use of the given acoustic reference models,
- if said first word sequence differs from the known or estimated word sequence, said first word sequence is assigned as an alternative word sequence to the known or estimated word sequence,
- if not, a second scored word sequence is generated for the given acoustic speech signal through the use of the given acoustic reference models, and, provided the difference between the scores of the first and the second word sequence is smaller than a first threshold value, said second word sequence is assigned as an alternative word sequence to the known or estimated word sequence,

- an adaptation of at least one of the given acoustic reference models is carried out with the use of the assignation/assignments thus determined.

8. Acoustic reference models of a speech recognition system which are generated  
5 through the use of a method as claimed in any one of the claims 1 to 7.

9. A data carrier with acoustic reference models of a speech recognition system  
as claimed in claim 8.

10. A speech recognition system with acoustic reference models as claimed in  
claim 8.

11. A method for the discriminative adaptation of reference models of a pattern  
recognition system wherein, starting from a quantity of given patterns whose classification is  
known in each case or is estimated, and starting from given reference models,  
15

- a first scored classification is generated for one of the given patterns through the use of  
the given reference models,
- if said first classification differs from the known or estimated classification, said first  
classification is assigned as an alternative classification to the known or estimated  
classification,  
20
- if not, a second scored classification is generated for the given pattern with the use of the  
given reference models and, provided the difference between the scores of the first and  
second classifications is smaller than a first threshold value, said second classification is  
assigned as an alternative classification to the known or estimated classification,
- 25 - an adaptation of at least one of said given reference models is carried out with the use of  
the assignation/assignments thus determined.

12. Reference models of a pattern recognition system which are generated through  
the use of a method as claimed in claim 11.

30

13. A data carrier with reference models of a pattern recognition system as  
claimed in claim 12.

14. A pattern recognition system with reference models as claimed in claim 12.